AMENDMENTS TO THE CLAIMS

1. (currently amended) A method of generating a template of a normal heartbeat of a heart of a patient, comprising:

detecting heartbeats as a plurality of events;

collecting a predetermined number of detected non-paced heartbeats having predetermined characteristics during a first discrete sample collection interval and identifying them as first selected events;

generating a current template from the collected first selected events;

waiting a predetermined delay;

collecting a predetermined number of detected non-paced heartbeats having predetermined characteristics during a second discrete sample collection interval subsequent to the first discrete sample collection interval and the predetermined delay and identifying the predetermined number of detected non-paced heartbeats collected during the second discrete sample collection interval as second selected events; then

comparing the collected second selected events with the current template to obtain a result; and

generating an updated template from the collected second selected events ~~based on the result.~~ in response to the result being an invalid template; and

delivering a therapy to the heart of the patient based, at least in part, on the updated template.

2. (previously presented) The method of claim 1, further comprising:

identifying events of the plurality of events having the predetermined characteristics as third selected events;

monitoring the template in response to the third selected events; and

updating the template using the third selected events in response to the monitoring.

3. (original) The method of claim 1, wherein identifying events as first selected events and identifying events as second selected events comprises:

determining whether there are consecutive events of the plurality of events having first characteristics; and

identifying a predetermined number of events of the plurality of events subsequent to the consecutive events having second characteristics as one of first selected events and second selected events.

4. (original) The method of claim 3, wherein the first characteristics correspond to two consecutive events that are ventricular sensed events having RR-intervals greater than a threshold interval.

5. (original) The method of claim 3, wherein the second characteristics include a ventricular sense event other than a ventricular pace event, a ventricular sense event having an R-R interval greater than a predetermined rate, a ventricular sense event other than a first ventricular sense event immediately following a ventricular pace event, and a ventricular sense event that was immediately preceded by an atrial pace event and for which an interval between the ventricular sense event and the atrial pace event is greater than a threshold interval.

6. (original) The method of claim 5, wherein the predetermined rate is approximately equal to 600 ms and the threshold interval is approximately equal to 100 ms.

7. (original) The method of claim 3, further comprising:

computing a cross-match between the predetermined number of events identified as first selected events to generate cross-matches; and

determining whether a predetermined number of the generated cross-matches are within a predetermined cross-match threshold, wherein the template is generated

from events of the predetermined number of events corresponding to the cross-matches determined to be within the cross-match threshold.

8. (original) The method of claim 7, further comprising:

determining, in response to the predetermined number of the generated cross-matches not being within a predetermined cross-match threshold, whether a predetermined number of cross-match computations have failed to generate the predetermined number of generated cross-matches that are within the predetermined cross-match threshold; and

generating a delay in response to the predetermined number of cross-match computations having failed to generate the predetermined number of generated cross-matches that are within the predetermined cross-match threshold.

9. (original) The method of claim 3, further comprising:

determining whether RR-intervals associated with the first selected events are greater than an average RR-interval;

computing, in response to the RR-intervals associated with first selected events being greater than an average RR-interval, a cross-match between the predetermined number of events identified as first selected events to generate cross-matches; and

determining whether a predetermined number of the generated cross-matches are within a predetermined cross-match threshold, wherein the template is generated from events of the predetermined number of events corresponding to the cross-matches determined to be within the cross-match threshold.

10. (currently amended) An implantable medical device, comprising:

means for detecting heartbeats as a plurality of sensed events;

means for collecting a predetermined number of detected non-paced heartbeats having predetermined characteristics during a first discrete sample collection interval and identifying them as first selected events;

means for generating a current template from the collected first selected events;

means for waiting a predetermined delay;

means for collecting a predetermined number of detected non-paced heartbeats having predetermined characteristics during a second discrete sample collection interval subsequent to the first discrete sample collection interval and the predetermined delay and identifying the predetermined number of detected non-paced heartbeats collected during the second discrete sample collection interval as second selected events;

means for comparing the collected second selected events with the current template to obtain a result after the collection of the second selected events; and

means for generating an updated template from the collected second selected events in response to the result being an invalid template. ~~based on the result.~~

11. (previously presented)The device of claim 10, further comprising:

means for identifying events of the plurality of events having the predetermined characteristics as third selected events;

means for monitoring the template in response to the third selected events; and

means for updating the template using the third selected events in response to the monitoring.

12. (original) The device of claim 10, wherein the means for identifying events as first selected events and the means for identifying events as second selected events comprise:

means for determining whether there are first consecutive events of the plurality of events having first characteristics; and

means for identifying a predetermined number of events of the plurality of events subsequent to the first consecutive events having second characteristics as first selected events.

13. (original) The device of claim 12, wherein the first characteristics correspond to two consecutive events that are ventricular sensed events having RR-intervals greater than a threshold interval.

14. (original) The device of claim 12, wherein the second characteristics include being a ventricular sense event other than a ventricular pace event, a ventricular sense event having an R-R interval greater than a predetermined rate, a ventricular sense event other than a first ventricular sense event immediately following a ventricular pace event, and a ventricular sense event that was immediately preceded by an atrial pace event and for which an interval between the ventricular sense event and the atrial pace event is greater than a threshold interval.

15. (original) The device of claim 14, wherein the predetermined rate is approximately equal to 600 ms and the threshold interval is approximately equal to 100 ms.

16. (original) The device of claim 12, further comprising:

means for computing a cross-match between the predetermined number of events identified as first selected events to generate cross-matches; and

means for determining whether a predetermined number of the generated cross-matches are within a predetermined cross-match threshold, wherein the template is generated from events of the predetermined number of events corresponding to the cross-matches determined to be within the cross-match threshold.

17. (original) The device of claim 16, further comprising:

means for determining, in response to the predetermined number of the generated cross-matches not being within a predetermined cross-match threshold, whether a predetermined number of cross-match computations have failed to generate the predetermined number of generated cross-matches that are within the predetermined cross-match threshold; and

means for generating a delay in response to the predetermined number of cross-match computations having failed to generate the predetermined number of generated cross-matches that are within the predetermined cross-match threshold.

18. (original) The device of claim 12, further comprising:

means for determining whether RR-intervals associated with the first selected events are greater than an average RR-interval;

means for computing, in response to the RR-intervals associated with first selected events being greater than an average RR-interval, a cross-match between the predetermined number of events identified as first selected events to generate cross-matches; and

means for determining whether a predetermined number of the generated cross-matches are within a predetermined cross-match threshold, wherein the template is generated from events of the predetermined number of events corresponding to the cross-matches determined to be within the cross-match threshold.

19. (previously presented)The method of claim 1, further comprising:

determining whether there are consecutive events during the first and second discrete sample collection intervals having first characteristics; and

identifying a predetermined number of events of the plurality of events subsequent to the consecutive events having second characteristics;

wherein the first characteristics correspond to two consecutive events that are ventricular sensed events having RR-intervals greater than a threshold interval, and the second characteristics include a ventricular sense event other than a ventricular pace event, a ventricular sense event having an R-R interval greater than a predetermined rate, a ventricular sense event other than a first ventricular sense event immediately following a ventricular pace event, and a ventricular sense event that was immediately preceded by an atrial pace event and for which an interval between the ventricular sense event and the atrial pace event is greater than a threshold interval.

20. - 23. (canceled)